

Serial No. 10/606,840

REMARKS

Reconsideration of the present application is respectfully requested.

One paragraph of the specification has been amended to correct a spelling error and a grammatical error.

Claims 1, 2 and 5-16 have been rejected as being unpatentable under 35 USC 103(a) over Miyaguchi et al (6,373,147) and claims 3-4 have been rejected as being unpatentable under 35 USC 103(a) over Miyaguchi et al in view of Foo et al (6,095,554). Claims 13-16 have been canceled without prejudice or disclaimer. The rejections as applied to remaining claims 1-12 are discussed below.

Independent claims 1 and 2 have been amended as indicated above. Each of the amended independent claims 1 and 2 recites an embodiment of the present invention as disclosed in, for example, Figs. 6, 8 and 9A-9D and on page 14, line 31 – page 15, line 28 of the specification. Specifically, the recited transmission means of the collision sensor unit is for rearranging the bits of the digital data and those of the mirror data corresponding thereto to form at least first to third data such that each bit of the digital data belongs, in a distributed manner, to at least two of the first to third data, and each bit of the mirror data belongs, in a distributed manner, to at least two of the first to third data, and then transmitting the first to third data to the control unit.

In addition, in each of amended claims 1 and 2, the recited receiving means of the control unit is for receiving the first to third data and reconstructing first digital data corresponding to the digital data and second digital data corresponding to the mirror data based on the received bits included in the first to third data, and for then determining that data reception is correctly completed when the reconstructed first digital data and the reconstructed second digital data are identical to each other.

Serial No. 10/606,840

The transmission means and receiving means of the present invention provide an advantage over the prior art in detecting erroneous data transmission. For example, as illustrated in Figs. 8 and 9, the digital data (acceleration data) A consisting of one byte of 8 bits of D0 to D7 and the mirror data consisting of one byte of 8 bits of $\overline{D0}$ to $\overline{D7}$ are rearranged to form first data (first byte transmitted/received data) A1 to third data (third byte transmitted/received data) A3 corresponding to the first to third data. The bits D0 to D5 of the digital data correspond to the first data A1, the bits of $\overline{D0}$ to $\overline{D5}$ of the mirror data correspond to the third data A3, and the remaining bits D6 and D7 of the first data A1 and the remaining bits of $\overline{D6}$ and $\overline{D7}$ of the third data correspond to the second data A2.

When the digital data A and the mirror data \overline{A} corresponding thereto are transmitted using a well-known conventional data transmitting technique, if, for example, the third bit from the leading bit of each of the digital data and the mirror data is similarly garbled, it may be difficult to determine whether erroneous data is received since it may be determined that the received garbled digital data and the received garbled mirror data are identical to each other.

However, in the configuration recited in each of the amended claims 1 and 2, even if, for example, the third bit from the leading bit of each of the first to third data A1 to A3 is similarly garbled, because the third bit D6 of the second data A2 corresponding to the seventh bit of the first data A1 is garbled, it can be determined that the reconstructed first digital data corresponding to the digital data A and the reconstructed second digital data corresponding to the mirror data \overline{A} are different from each other.

The above recited feature of the present invention permits reception of digital data containing such bit errors to be detected, thereby preventing the claimed collision decision means from determining whether there is an occurrence of collision of a vehicle based on the digital data containing such bit errors.

Serial No. 10/606,840

Miyaguchi et al fails to disclose or suggest that the first and second features of each of the amended claims 1 and 2.

Further, Applicants assert that the above discussed features of each of the amended claims 1 and 2 would not be obvious to one skilled in the art. Therefore, even if Miyaguchi et al and well known error detection techniques are incorporated with each other, amended claims 1 and 2 are patentably distinguishable from that which is know in the art.

Therefore, as claims 1 and 2 patentably distinguish the claimed invention from the art of record, it is respectfully requested that the Examiner withdraw his rejection of the independent claims 1 and 2, as well as all remaining dependent claims, and allow the application.

If questions relating to patentability remain, the Examiner is invited to contact the undersigned by telephone. A petition for a one-month extension of time is included herewith. Please charge any additional unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,



David G. Posz
Reg. No. 37,701

Posz Law Group, PLC
12040 South Lakes Drive
Suite 101
Reston, VA 20191
Phone 703-707-9110
Fax 703-707-9112
Customer No. 23400